GE
Consumer & Industrial

Operating Manual

Digital Energy™

ADVANCED SNMP
WEB INTERFACE CARD

(for firmware version 1.84 or higher)

SG Series 10 - 500 / 400VAC CE / 480VAC UL
SitePro 10 - 500 kVA / 400VAC CE
SitePro A 10 - 300 kVA / 208-480VAC UL
LP 33 / 10, 20 & 30 kVA / 400VAC CE / Series 4
LP 33 / 10 & 20 kVA / 208VAC UL / Series 1

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UPS EQUIPMENT ACCESSORY

Certified
Quality System
ISO 9001
Reg.No.CSQ 9130.GELE

Model	ADVANCED SNMP / WEB INTERFACE CARD
Date of issue:	01.02.2007
File name:	OPM_CNT_ADV_SNM_CRD_XGB_V050
Author:	Lorenzo Giuntini
Revision:	5.0
Identification No.	11701

Up-dating

Revision	Concerns	Date
3.1	General review for UL and new layout	15.06.2004
4.0	Without BNC, new layout and company name changes (GE)	06.12.2004
5.0	Introduction of PMAD functionality	12.12.2006

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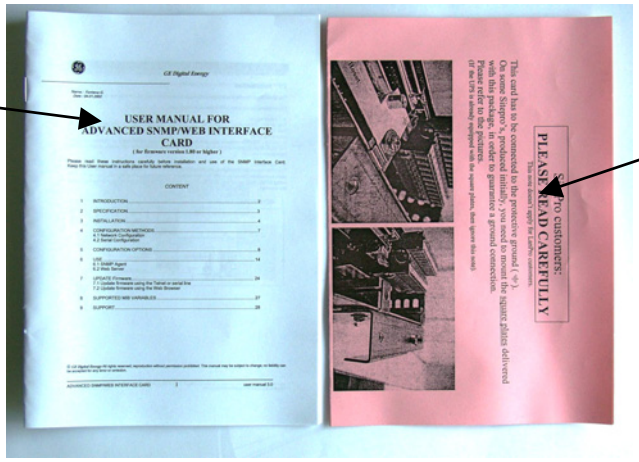
1 CONTENT OF THE KIT

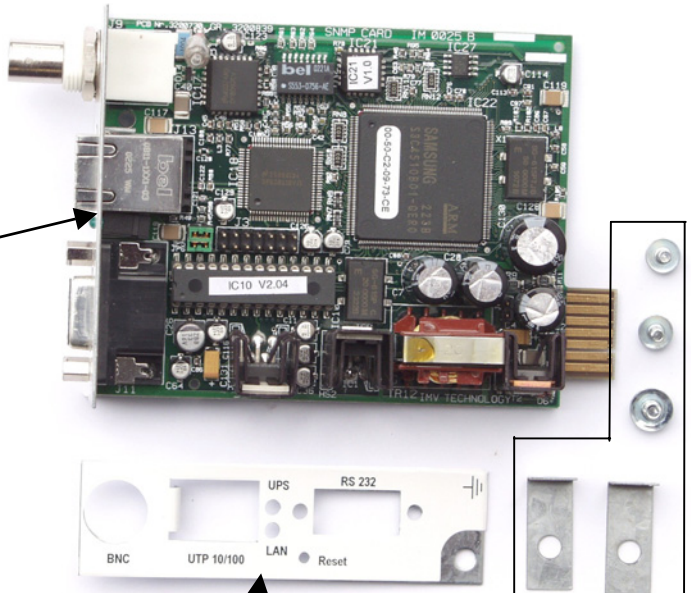
The advanced *SNMP Card* is delivered with the following material:

User Manual



Special note for *SitePro* installation

Advanced SNMP Card
IM0025



Smaller front panel for SitePro and *SG Series* UPS

Square plates and screws for older *SitePro* UPS

2 INTRODUCTION

WARNING !

The work to be done is reserved to Service engineers which have been previously trained on these UPS's, and therefore have thorough knowledge about the function and handling of this equipment.

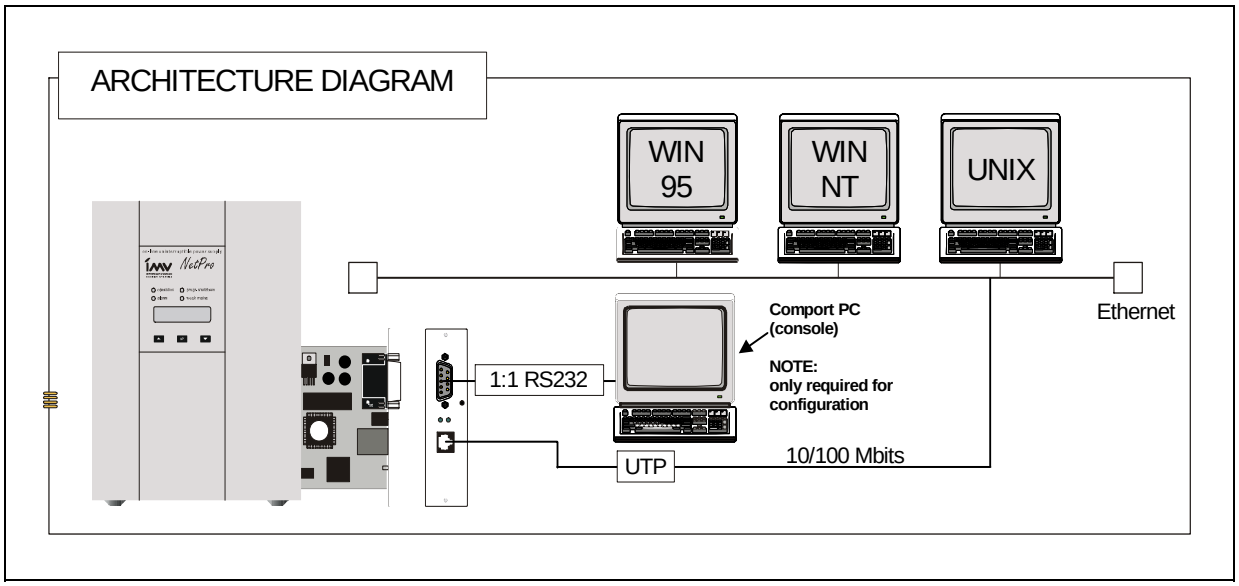
Introduction

The *SNMP/Web Interface* is designed to present information about the UPS on the network.

The interface provides the UPS information in two ways:

- **SNMP Agent**
  The SNMP information complies to the standard UPS-MIB which is defined in RFC1628.
  Additional information are available with the GESingle and GEParallel MIB.
  This format allows one or more NMSs (Network Management System) to monitor, manage and control the UPS.
  In addition, GE supports protection software and remote monitoring software using this information to determine the status of the UPS and guarantee safe and orderly shutdown when necessary.

- **Web Server**
  The UPS information is also available in HTML format. HTML is the basic language for internet communication. Every standard internet browser can be used to monitor and control the UPS using HTML from anywhere on the network or even from anywhere in the world when using the internet.



3 SPECIFICATION

Here follows a short description regarding the different plugs present on the frontal panel of the card:

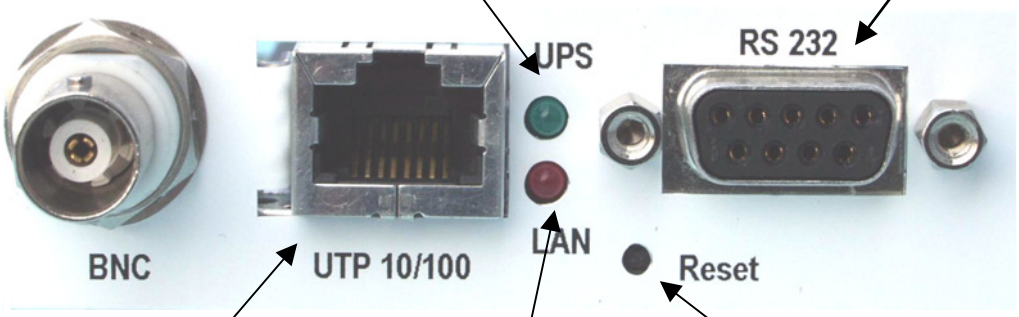
Green Led

Indicate 4 different operating modes of the card:

1. When on and stable, it indicates that the card is powered, but there is no communication with the UPS.
2. When blinking slow (1/sec.), it indicates that the card is powered and there is communication with the UPS.
3. When blinking fast (6/sec.), it indicates the card is updating the ROM and in this case, it is most important not to reset or disconnect the card.
4. If the card is started in the restore mode, the led is blinking corresponding to the SOS notification (**...---...**).

RS232 Port

Used only to configure the parameters of the card (9600-N-8-1). (see chapter 6).



RJ45 Connector

Used to communicate with 10 or 100 Mbits according to the standard 10Base - T or 100Base –TX.

Red Led

Indicates the transmission and reception of the packets over the LAN bus.

Reset Button

For a complete reset of the card.

4 INSTALLATION

WARNING !

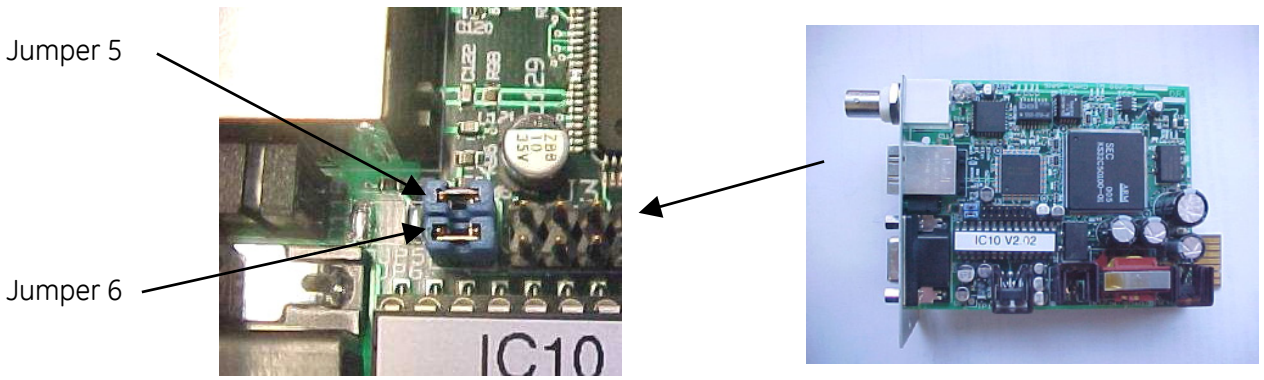
The work to be done is reserved to Service engineers which have been previously trained on these UPS's, and therefore have thorough knowledge about the function and handling of this equipment.

1 Check if the card has the correct logical address.

The logical address is installed trough the jumper *JP5*, *JP6* in the following way:

	Logical Address [dec]	Jumper 5	Jumper 6
SNMP Card 0 (1)	84	Installed	Installed
SNMP Card 1	85	Installed	Not installed
SNMP Card 2	86	Not installed	Installed
SNMP Card 3	87	Not Installed	Not Installed

(1) Default setup



IMPORTANT: Attention for correct direction of the jumpers.

NOTE:
- The setting of the jumper can be disabled with a specific configuration parameter (see chapter 6, parameters "O")
- The logical address is only important when more than one *SNMP Card* is installed on the same UPS system.

NOTE !

Please refer to the "*Safety Rules*" included in the "*Operating Manual*" of the UPS.

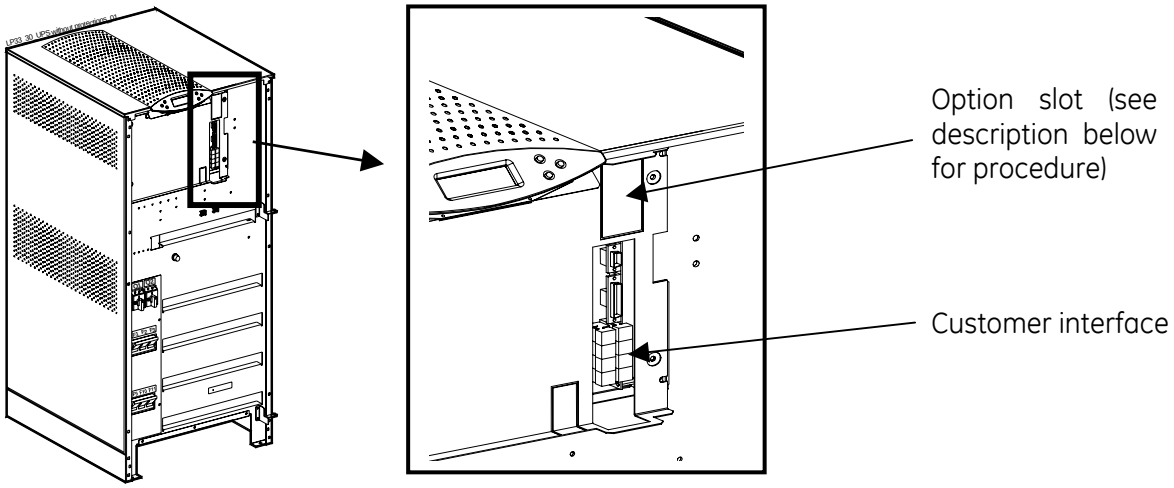
Please read carefully the UPS "*Operating Manual & installation Guide*" before installing or operating the equipment.

If any problems are encountered with the description of this installation guide, please contact the nearest *Service Centre* before proceeding.

2 Install the *SNMP Card* in option slot.

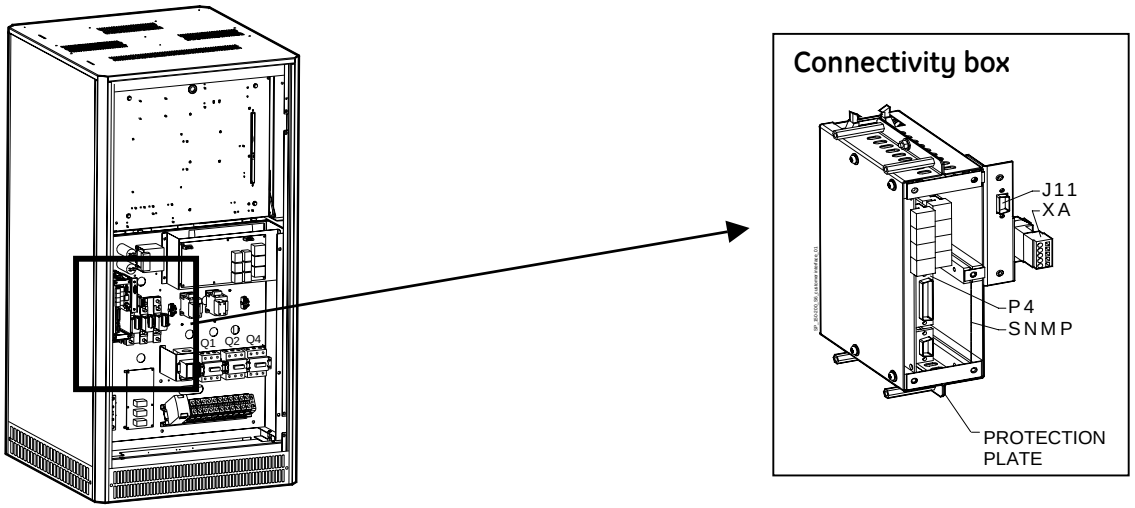
IMPORTANT: Switch off the UPS, and wait approx. 2 minutes or switch the UPS to the manual bypass. Please ensure that the mains input is reliable during this period.
All cables must be disconnected from the card during the installation.

Install procedure for *LANPRO 33 / LP 33 Series*



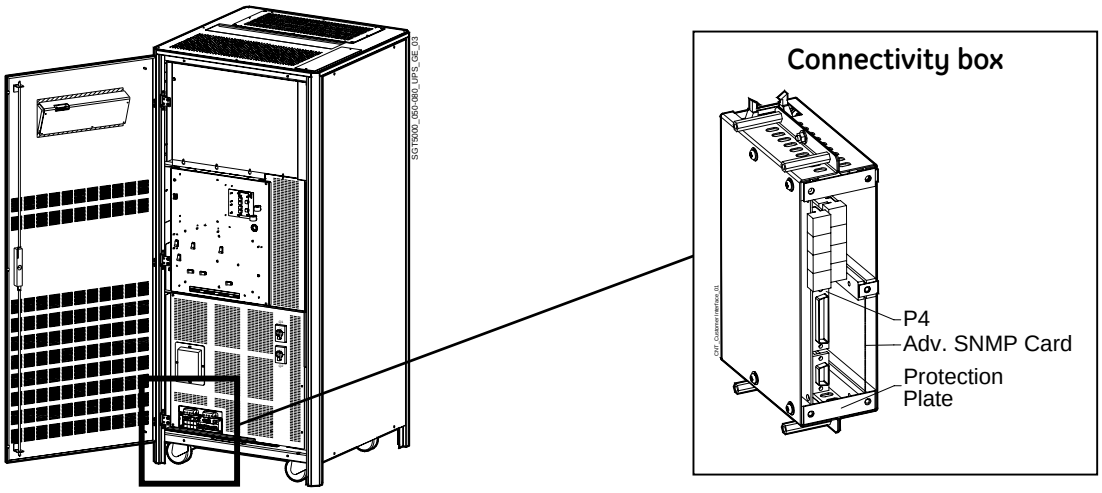
1. Remove the plate that covers the Option slot by cutting the edges which are holding the plate. **Take care the plate does not fall inside the UPS!**
2. Slide carefully the *SNMP Card* into the Options slot.
3. Fix the frontal plate of the *SNMP Card* to the UPS, using the screw included in the *SNMP Interface Card* kit.

Install procedure *for SitePro* S6



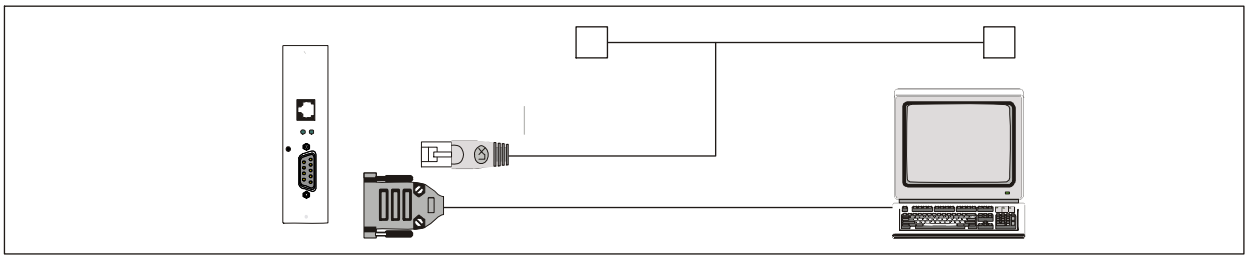
1. Change the frontal plate with the smaller one delivered with the Kit.
2. Insert the *SNMP Card* in the options slot.
3. Fix the frontal plate of the *SNMP Card* to the connectivity box, using the screw included in the *SNMP Interface Card* kit.

Install procedure *for SG Series*



1. Change the frontal plate with the smaller one delivered with the Kit.
2. Insert the *SNMP Card* in the options slot.
3. Fix the frontal plate of the *SNMP Card* to the connectivity box, using the screw included in the *SNMP Interface Card* kit.

3 Make all necessary connections (see architecture diagram in chapter 2)



4 Check that after a while (max. 30 sec.) the green led starts to blink.
This means that the communication with the UPS is established.

5 Switch on the UPS or go back to normal mode from bypass.

5 REMOVE

WARNING !

The work to be done is reserved to Service engineers which have been previously trained on these UPS's, and therefore have thorough knowledge about the function and handling of this equipment.

NOTE !

The installation and cabling of the option *"Advanced SNMP/ WEB Interface"* must be performed by *QUALIFIED SERVICE PERSON*.

Please refer to the *"Safety Rules"* included in the *"Operating Manual" of the UPS*.

Please read carefully the UPS *"Operating Manual & installation Guide"* before installing or operating the equipment.

If any problems are encountered with the description of this installation guide, please contact the nearest *Service Centre* before proceeding.

1 Switch off the UPS, and wait approx. 2 minutes or switch the UPS to the manual bypass

Please ensure that the mains input is reliable during this period.

2 Remove all connections from the *Advanced SNMP Card*

3 Remove the *Advanced SNMP Card* from the slot

4 Switch on the UPS or go back to normal mode from bypass

6 CONFIGURATION METHODS

Configuration of the *SNMP Card* can be done in two ways:
Via the network *(Chapter 6.1)* or using a serial connected computer with a terminal emulation program *(Chapter 6.2)*.

For full configuration of the *SNMP Card* from the network, a *BOOTP* or *DHCP Server* must be available on the network.

6.1 CONFIGURATION OVER THE NETWORK

The factory default way of retrieving an *IP-address* is by using *DHCP*.
On the card you will find a sticker with its *MAC-address* that needs to be configured in the *BOOTP/DHCP server*.
After assigning the IP-address to this *MAC-address* in the *BOOTP/DHCP Server* the card needs to be rebooted to retrieve this *IP-address*.
For a reboot press the reset button on the card.

NOTE: the *SNMP Card* recognizes a *BOOTP-reply* from the server only when this latter uses broadcast addressing for the destination on both the *MAC* and the *IP* address fields.

Configuration of the other parameters can be performed using either a telnet program or a Web-browser.
The default loginname and password are both 'GE'.
After having passed the login info the configuration screen will appear.
For security reasons we suggest to change the default loginname and password immediately!

Please proceed with *Chapter 7* (Telnet) or *Chapter* 8.2 (Web Browser).

6.2 CONFIGURATION VIA A SERIAL CONNECTION

Connect the *SNMP Card* to the computer using a standard 1:1 serial cable.
Run a terminal simulator like *Windows Terminal* or *Hyperterminal*.

Configure your terminal simulator as follows:
9600 bps, 8 data bits, 1 stop bit, none parity check, none flow control.
Terminal emulation: *VT-100*

Establish a connection and press <x>.
The configuration screen will appear. Please proceed with *Chapter 7*.

7 CONFIGURATION OPTIONS

The configuration screens of the telnet method and serial method are identical, while the configuration screens of the web server is a somewhat different (for more details about the web server please refer to *Chapter 6.2*).

1 After having executed the steps in either 6.1 or 6.2 the following screen appears

```
---<<Current config>>---<<Code vY.YY bZ.ZZ>>---[-]---[MAC=XX:XX:XX:XX:XX:XX]---
   [IP=0.0.0.0] [mask=255.255.255.0] [gateway=0.0.0.0]
------------------------------------------------------------------------------

1. boot-method    = [dhcp]                     R. clear reset count [0]
2. ip-address     = [0.0.0.0]                  T. ping
3. subnet mask    = [255.255.255.0]            U. trap config
4. gateway        = [0.0.0.0]                  V. responsible e-mail
5. trap addresses = [0.0.0.0] [0.0.0.0] [0.0.0.0] [0.0.0.0]
6. trap community = [public] [public] [public] [public]
7. trap UDP port  = [162] [162] [162] [162]
8. get-community  = [public]
9. set-community  = [public]
A. sys-contact    = [The contact person for this agent]
B. sys-name       = [The administrative name of the agent]
C. sys-location   = [The physical location of the agent]
D. upsName        = [The administrative name of the connected UPS]
E. upsAttachedDev = [The type of equipment connected to the UPS]
F. snmpport       = [161]    H. telnet server  = [on]
G. httpport       = [80]     I. http server    = [on]
J. telnet/http username = [GE]
K. change telnet/http password   L. update firmware   M. MAC   N. reboot
O. cardaddr = [0]   P. upsaddr = [0]   Q. logout   S. ethernet = [Auto]
GE>
```

The settings shown are the settings of the currently active configuration.

Using the Telnet/Serial menu you can enter the necessary values in each field by typing the menu item number/character and then type the value of the selected parameters

Also partial names which are unique are accepted:

Examples: *GE> 1*
Choose boot-method (0=dhcp, 1=bootp, 2=configured ip/mask/gw) [2]:
0 [Enter]
GE>

2 Enter the necessary value in each field

3 Press <N> to reboot the agent

4 In case of configuration via a serial connection disconnect the *RS232* cable from the *SNMP Interface Card*

Explanation of configuration parameters

Please note: All changes to the configuration will be effective only after having executed a reboot command ("N").

1. boot-method

Syntax: *GE> 1*
Choose boot-method (0=dhcp, 1=bootp, 2=configured ip/mask/gw) [0]
X [Enter]

Default: *0 (dhcp)*

Parameters: *0 = dhcp -> The card obtains its dynamic IP-address from a DHCP server.*
1 = bootp -> The card obtains its static IP-address from the BOOTP server.
2 = configured ip/mask/gw -> The card uses a static IP-address configured in its ROM (Parameters 2,3 and 4, which follows).

Description: *Defines the way the SNMP plug in card boots and links itself up to the network.*

2. ip-address

Syntax: *GE> 2*
Enter card ip [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]

Default: *0.0.0.0*

Description: *The static IP-address of the SNMP plug in card.*
Note: If BOOTP/ DHCP is used this value is ignored.

3. submask mask

Syntax: *GE> 3*
Enter netmask [255.255.255.0]:
XXX.XXX.XXX.XXX [Enter]

Default: *255.255.255.0*

Description: *The subnet the SNMP plug in card is situated in.*
Note: If BOOTP/DHCP is used AND the BOOTP/DHCP server provides the subnet mask, this value is ignored.

4. gateway

Syntax: *GE> 4*
Enter gateway [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]

Default: *0.0.0.0*

Description: *The IP-address of the default gateway (default router).*
Note: If BOOTP/DHCP boot-method is used AND the BOOTP/DHCP server provides the IP-address to the default gateway this value is ignored.

5. traps addresses

Syntax: *GE> 5*
Enter trap 1 ip [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]
Enter trap 2 ip [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]
Enter trap 3 ip [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]
Enter trap 4 ip [0.0.0.0]:
XXX.XXX.XXX.XXX [Enter]

Default: *[0.0.0.0] [0.0.0.0] [0.0.0.0] [0.0.0.0]*

Description: *Specifies the destination IP-addresses of Network Management Stations traps have to be sent to.*
A maximum of 4 trap addresses can be defined.
To disable a trap, specify [0.0.0.0] as address.

6. traps community

Syntax: *GE> 6*
Enter trap 1 community [public]:
XXXXXXX [Enter]
Enter trap 2 community [public]:
XXXXXXX [Enter]
Enter trap 3 community [public]:
XXXXXXX [Enter]
Enter trap 4 community [public]:
XXXXXXX [Enter]

Default: *[public] [public] [public] [public]*

Description: *Specifies the community names of Network Management Stations traps are sent to.*

7. traps UDP port

Syntax: *GE> 7*
Enter trap 1 UDP port [162]:
XXXXXXX [Enter]
Enter trap 2 UDP port [162]:
XXXXXXX [Enter]
Enter trap 3 UDP port [162]:
XXXXXXX [Enter]
Enter trap 4 UDP port [162]:
XXXXXXX [Enter]

Default : *[162] [162] [162] [162]*

Description: *Assign the UDP port-number to every trap destination previously defined.*

8. get-community

Syntax: *GE>8*
Enter get-community [public]:
XXXXXXX [Enter]

Default: *public*

Description: *SNMP community name (password) to read SNMP UPS information from the SNMP plug in card.*

9. set-community

Syntax: *GE> 9*
Enter set-community [public]:
XXXXXXX [Enter]

Default: *public*

Description: *SNMP community name (password) to write SNMP UPS information to the SNMP plug in card.*

A. sys-contact

Syntax: *GE> A*
Enter sys-contact [The contact person for this agent]:
XXXXXXXXXXXXXXX [Enter]

Default: *The contact person for this agent*

Description: *The contact person for this agent*

B. sys-name

Syntax: *GE> B*
Enter sys-name [The administrative name of the agent]:
XXXXXXXXXXXXXXX [Enter]

Default: *The administrative name of the agent*

Description: *The administrative name of the agent*

C. sys-location

Syntax: *GE> C*
Enter sys-location [The physical location of the agent]:
XXXXXXXXXXXXXXX [Enter]
Default: *The physical location of the agent*
Description: *The physical location of the agent*

D. upsName

Syntax: *GE> D*
Enter upsName [The administrative name of the connected UPS]:
XXXXXXXXXXXXXXX [Enter]
Default: *The administrative name of the connected UPS*
Description: *The administrative name of the connected UPS*

E. upsAttachedDev

Syntax: *GE> E*
Enter upsAttachedDev [The type of equipment connected to the UPS]:
XXXXXXXXXXXXXXX [Enter]
Default: *The type of equipment connected to the UPS*
Description: *The* type of equipment connected to the UPS

F. snmpport

Syntax: *GE> F*
Enter snmp port [161]:
XXX [Enter]
Default: *[161]*
Description: *Specifies the SNMP plug in card's UDP communication port number.*

G. httpport

Syntax: *GE> G*
Enter http port [80]:
XXX [Enter]
Default: *[80]*
Description: *Specifies the SNMP plug in card's HTTP communication port number.*

H. Telnet server

Syntax: *GE> H*
Telnet server (0=off 1=on) [1]:
X [Enter]
Default: *1=on*
Description: *Enables (on) or disables (off) configuration via telnet.*

I. Http server

Syntax: *GE> I*
Http server (0=off 1=on) [1]:
X [Enter]
Default: *1=on*
Description: *Enables (on) or disables (off) configuration via web browser.*

J. Telnet/Http username

Syntax: *GE> J*
Enter new username [GE]:
XXXXX [Enter]
Default: *GE*
Description: *Username for protects the SNMP card from unauthorised access via http or telnet session.*

K. Change Telnet/Http password

Syntax: *GE> K*
Enter new passwd [to keep current passwd just press enter]:
XXXXX [Enter]
Re-enter new passwd:
XXXXX [Enter]

Default: *GE*

Description: *Password for protects the SNMP card from unauthorised access via http or telnet session.*

L. Update firmware

Syntax: *GE> L*
FTP Server Ready. Ftp the image and press Enter.
[When the new release of the software has been transferred to the card using FTP protocol press Enter. For more details see chapter 5]

Description: *Enable and start the FTP server to update the firmware.*

M. MAC

Syntax: *GE> M*
Each card has unique MAC address. This value may be changed only by GE.
If you need to change it, contact GE support. Press Enter to continue.

Description: *It is possible to change the MAC address only if the GE support is called.*
The GE support give you the necessary instruction to make this change.

N. reboot

Syntax: *GE> N*

Description: *Reboots the SNMP plug to activate the changes made to the configuration and exit from the current configuration session.*

O. CardAddr

Syntax: *GE> O*
Enter card logical address (0=autoselect) [0]:
XX [Enter]

Default: *0 = autoselect*

Description: *This is the logical address of the card and, when different from zero, overrides the jumper setting.*
The valid range for this value is [84...87]. See Chapter 4.1.

P. UpsAddr

Syntax: *GE> P*
Enter ups logical address (0=autoselect) [0]:

Default : *0 = autoselect*

Description: *This is the logical address of the UPS.*
This address can be detected automatically if this parameter is set to zero.

Q. logout

Syntax: *GE>Q*
Quit (log out)

Description: *Logout from the current configuration session.*

Note: *Some configuration parameters can be lost when they haven't been stored with the reboot command ("N").*

R. Clear reset count

Syntax: *GE>R*

Description: *Clear the reset counter, which holds the number of times the board has been resettled.*

S. Ethernet

Syntax: *GE> S*
Ethernet mode (0=Auto, 1=10/100TP, 2=10TP/BNC, 3=BNC, 4=100TP, 5=10TP) [0]:
X [Enter]

Default: *0 = Auto*

Description: *Defines how the board should detect the correct Ethernet interface.*

- *Setting this parameters to zero (0), forces a full auto detection*
- *Setting this parameters to one (1), restricts the detection to the RJ45 connector (10 BASE-T or 100 BASE-TX)*
- *Setting this parameters to two (2), restricts the detection to 10 Mbits (10 BASE-T or BNC)*
- *Setting these parameters to 3, 4 or 5 the board refrains from auto detection and imposes the specific interface and speed.*

T. UpsAddr

Syntax: *GE> T*
Enter IP of host to ping:
X.X.X.X [Enter]

Description: *Ping the corresponding address TCP/IP.*

U. Trap Config

Syntax: *GE>U*
RFC traps (sent always from ups 0) (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 0 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 1 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 2 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 3 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 4 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 5 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 6 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 7 (0 = off 1 = on) [0] :
X [Enter]
GE Traps sent from ups 8 (0 = off 1 = on) [0] :
X [Enter]

Default: *all traps disabled*

Description: *Enabled/Disabled the sent of trap for a specified UPS.*

V. Responsible E-Mail

Syntax: *GE>V*
Enter responsible e-mail : [yourname@yourservicedepartement.com]:
XYZ [Enter]

Default: *yourname@yourservicedepartement.com*

Description: The e-mail address of the responsible person for this agent.

8 USE

8.1 SNMP AGENT

The *SNMP agent* can be used for two applications:

- **NMS (Network Management Software)**
  The card allows you to monitor a UPS with any *NMS* (eg. Tivoli, HP-Openview or CA Unicenter) to detect and react on any status change of the UPS.
  For this type of application the card needs to be configured to send traps to the computer on which the *NMS* runs.
  Up to four different trap addresses are configurable.

- **Protection software**
  Besides from monitoring a locally connected UPS, protection software can also monitor the status of a UPS via the network when it has an *SNMP agent* installed.
  This creates the ability to configure very flexible protection schemes.
  A typical example is an application server, which is depending on a database server.
  The protection software on the application server will detect a power failure on the database server and will start to close all database connections before the database server shuts itself down.

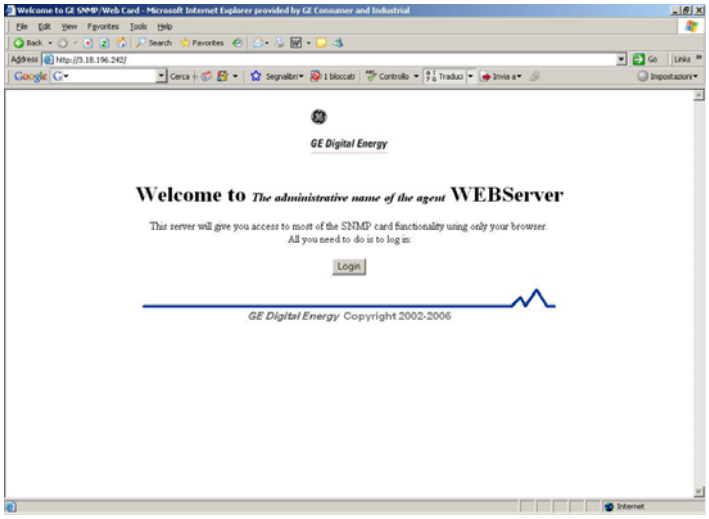
8.2 WEB SERVER

The built-in web server functionality enables the user to monitor and control the UPS using a standard internet browser.
The offered information of the web server gives a complete and detailed status overview in a very user friendly way.
Besides, measurement values of the UPS and complete configuration can be done via the web browser.

8.2.1 Login and Identification web page

To establish a connection with the Web Interface of the *SNMP Interface Card*, open your web browser and enter the *TCP/IP address* of the card in the address line of your browser.

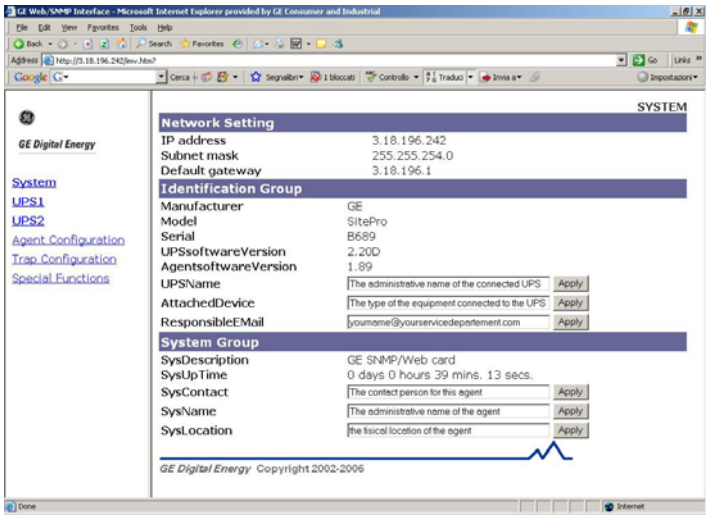
If the connection is established successfully, a screen very similar to the one below, will appear:


GE Digital Energy
Welcome to The administrative name of the agent WEBServer
This server will give you access to most of the SNMP card functionality using only your browser.
All you need to do is to log in:
Login
GE Digital Energy Copyright 2002-2006

To see the details of the UPS, click in the *"Login"* button and enter the user login-name and password.

The default login-name and password are both 'GE'.
For security reasons we suggest to change the default loginname and password immediately!

After having passed the login info, the "Identification" web page will appear.
The page that appears will show some basic information regarding the UPS and the *SNMP Interface Card*.



Depending on the actual UPS model, version and configuration, some features may be unsupported, or some values may not be displayed. In these cases, the parameter/value may be shown as '*n/a*' or '*not available*'. Particularly, in a parallel system, the identification data for the single UPSs will not include the System Group section.

Networks Setting

IP address:	The static IP-address of the SNMP plug in card.
Subnet mask:	The subnet the SNMP plug in card is situated in.
Default gateway:	The IP-address of the default gateway (default router).

Identification group

Manufacturer:	The name of the UPS manufacturer.
Model:	The UPS Model designation.
Serial:	The serial number of the UPS.
UPS Software Agent:	The UPS firmware/software version(s).
Agent Software Version:	The UPS agent software version.
UPS Name:	The administrative name of the connected UPS
Attached Device:	The type of equipment connected to the UPS
Responsible E-Mail:	The E-Mail address of the responsible person for this agent.

System Group

SysDescription:	A textual description of the entity. This value should include the full name and version identification of the system's hardware type, software operating-system, and networking software."
SysUpTime:	The time since the network management portion of the system was last re-initialized.
SysContact:	The contact person for this agent
SysName:	The administrative name of the agent
SysLocation:	The physical location of the agent

WARNING !

Every time a change is made, remember to click onto the appropriate "Apply" button to confirm the change.

Contrary if this "Apply" button has not been clicked, the change has no effect and when the web page is reloaded the old value appears.

If, after having confirmed the change, a error pop-up appears, means that the UPS cannot accept this change at all, or perform this change at this moment.

The Web Interface includes different web pages. The menu frame on the left-hand side of the page provides links to the various pages. It is a dynamic menu, which is automatically configured depending on the UPS configuration. The sub-items under a header can be shown/hidden by clicking on the header. In case of a stand-alone single UPS configuration, the menu will include the following entries:

- UPS *[header]*
  - Identification *[page link]*
  - Details *[page link]*
  - Alarms *[page link]*
  - PMAD *[page link]*
  - Test *[page link]*
  - Control *[page link]*
  - Configuration *[page link]*
- Agent Configuration *[page link]*
- Trap Configuration *[page link]*
- Special functions *[page link]*

In case of a parallel configuration, both the overall (System) values and the single UPS values are available. However, some controls ('Test', 'Control' and 'Configuration' pages) are not available at a System level.

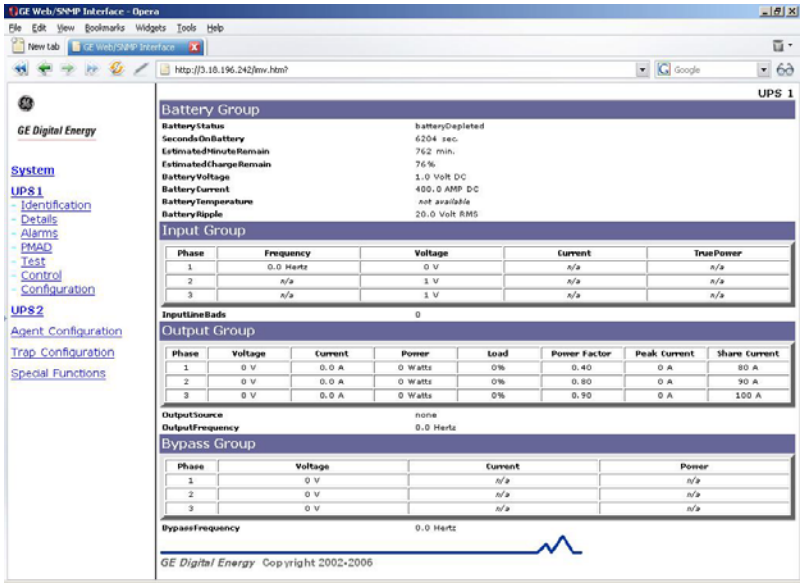
In a parallel configuration, the top-right corner of the web page will show whether the displayed values apply to the System or to single UPSs.

The various pages include the following information:

Identification:	Gives some basis information regarding the UPS and the SNMP Interface Card
Details:	Shows all details regarding the UPS (battery voltage, input voltage,...)
Alarms:	Shows the alarms (Events) of the UPS
PMAD:	Shows advanced diagnostic information
Tests:	Give the possibility to make some events in the UPS
Control:	Shows or changes the parameters regarding the shutdown
Configuration:	Shows or changes the parameters regarding the configuration of the battery, input, ...
Agent Configuration:	Shows or changes the parameters regarding the configuration of the agent (TCP/IP, submask, ...).
Trap Configuration:	Shows or changes the parameters regarding the configuration of the trap (TCP/IP trap, Trap UDP port, enabled/disabled trap, ...)
Special Function:	Offers the possibility to reboot or upgrade the firmware of the agent

8.2.2 Details web page

Clicking in the "Details" page link, a similar screen will appear:



Meaning of the different fields present at the UPS Details page:

Battery Group

Battery Status: Indication of the remaining capacity in the UPS system's batteries. A value of battery Normal indicates that the remaining run-time is greater than LowBattTime (see UPS configuration page). A value of battery Low indicates that the remaining battery run-time is less than or equal to Low BattTime (see UPS configuration page). A value of battery Depleted indicates that the UPS will be unable to sustain the present load when and if the utility power is lost (including the possibility that the utility power is currently absent and the UPS is unable to sustain the output).

Second On battery: If the unit is on battery power, the elapsed time since the UPS last switched to battery power, or the time since the network management subsystem was last restarted, whichever is less.
Zero shall be returned if the unit is not on battery power.

EstimatedMinuteRemain: An estimate of the time to battery charge depletion under the present load conditions if the utility power is off and remains off, or if it were to be lost and remains off.

EstimatedChargeRemain: An estimate of the battery charge remaining, expressed as a percent of full charge.

Battery voltage: The value of the present battery voltage.

Battery current: The present battery current.

Battery temperature: The ambient temperature at or the temperature close to the UPS Battery.

Battery ripple: The present DC link RMS voltage ripple.

Input Group

Phase: The input line identifier.

Frequency: The present input frequency.

Voltage: The magnitude of the present input voltage.

Current: The magnitude of the present input current.

True Power: The magnitude of the present input true power.

Bad Input Line: A count of the number of times the input entered an out-of-tolerance condition as defined by the manufacturer. This count is incremented by one each time the input transitions from zero out-of-tolerance lines to one or more input lines out-of-tolerance.

Output Group

Phase: The output line identifier.

Voltage: The magnitude of the present output voltage.

Current: The magnitude of the present output current.

Power: The present output true power.

Load: The percentage of the UPS power capacity presently being used on this output line.

Power Factor: The present output power factor. A positive value indicate an inductive load; a negative value indicate a capacitive load; value 1 indicate a resistive load.
Note: the value may not be available in case of low UPS load.

Peak Current: The present output peak current..

Share Current: The present share component of the inverter output current into a parallel system; RMS value.

Output Source: The present source of output power. The enumeration none indicates that there is no source of output power (and therefore no output power), for example, the system has opened the output breaker.

Output frequency: The present output frequency.

Bypass Group

Phase: The bypass line identifier.

Voltage: The present bypass voltage.

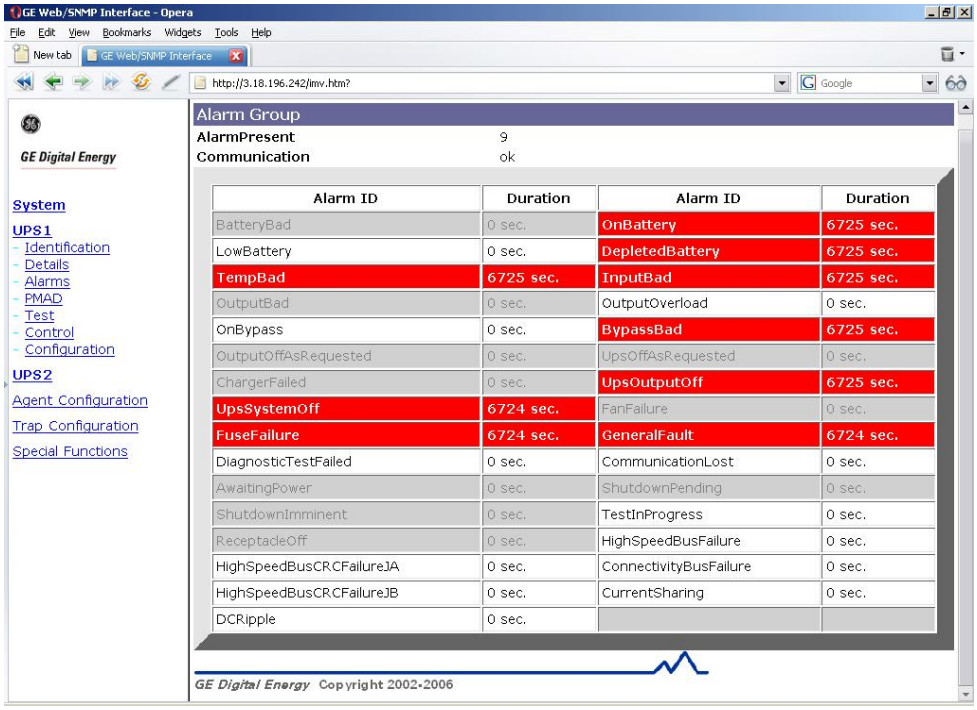
Current: The present bypass current.

Power: The present true power conveyed by the bypass.

Bypass Frequency: The present bypass frequency.

8.2.3 Alarms web page

Clicking on the “Alarms” page link a similar screen will appear:


GE Web/SNMP Interface - Opera
File Edit View Bookmarks Widgets Tools Help
New tab
GE Web/SNMP Interface
http://3.18.196.242/imv.htm?
Google
GE Digital Energy
System
UPS1
Identification
Details
Alarms
PMAD
Test
Control
Configuration
UPS2
Agent Configuration
Trap Configuration
Special Functions
Alarm Group
AlarmPresent 9
Communication ok
Alarm ID | Duration | Alarm ID | Duration
BatteryBad | 0 sec. | OnBattery | 6725 sec.
LowBattery | 0 sec. | DepletedBattery | 6725 sec.
TempBad | 6725 sec. | InputBad | 6725 sec.
OutputBad | 0 sec. | OutputOverload | 0 sec.
OnBypass | 0 sec. | BypassBad | 6725 sec.
OutputOffAsRequested | 0 sec. | UpsOffAsRequested | 0 sec.
ChargerFailed | 0 sec. | UpsOutputOff | 6725 sec.
UpsSystemOff | 6724 sec. | FanFailure | 0 sec.
FuseFailure | 6724 sec. | GeneralFault | 6724 sec.
DiagnosticTestFailed | 0 sec. | CommunicationLost | 0 sec.
AwaitingPower | 0 sec. | ShutdownPending | 0 sec.
ShutdownImminent | 0 sec. | TestInProgress | 0 sec.
ReceptacleOff | 0 sec. | HighSpeedBusFailure | 0 sec.
HighSpeedBusCRCFailureJA | 0 sec. | ConnectivityBusFailure | 0 sec.
HighSpeedBusCRCFailureJB | 0 sec. | CurrentSharing | 0 sec.
DCRipple | 0 sec.
GE Digital Energy Copyright 2002-2006

Meaning of the different fields shown on the UPS Alarms page:

Alarm Group

Alarm present: The present number of active alarm conditions.

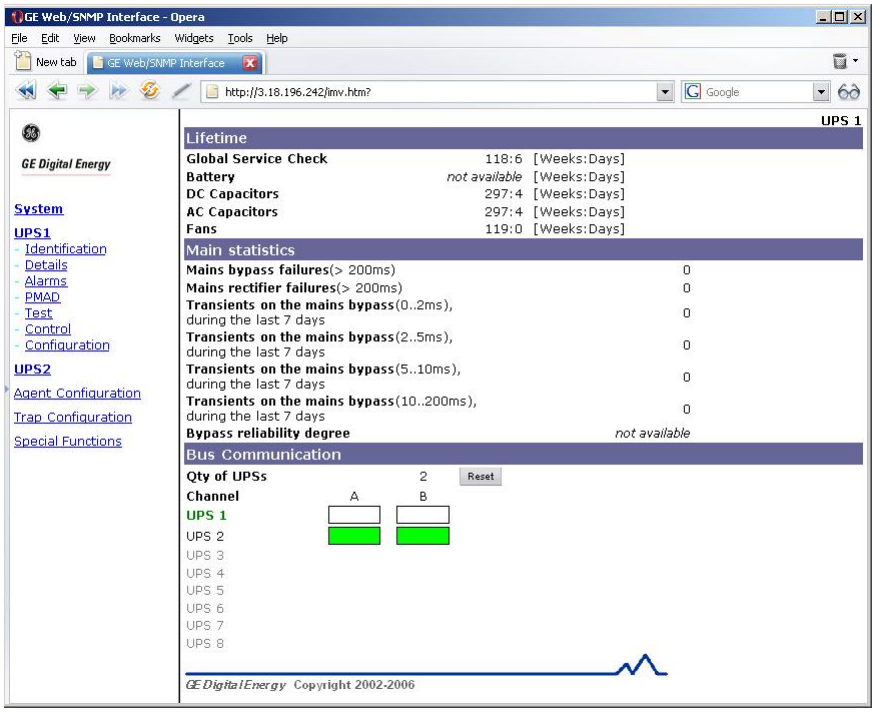
Communication: The state of the communication with the UPS and the *SNMP Interface Card*.
If this field is “ok” the card is communicating with the UPS, contrary with “failed” there is no communication between *SNMP Interface Card* and UPS.

Alarm ID: The name of the present alarm. When the box is red the alarm is activated, contrary when its white the alarm is inactive.
The grey colours of the box means that this alarm is not supported by the UPS

Duration: The time passed since the alarm has been activated.

8.2.4 PMAD web page

Clicking on the "PMAD" page link a similar screen will appear:



Meaning of the different fields shown on the UPS Alarms page:

Lifetime

Global Service Check:	The remaining time (in [Weeks:Days]) before a general service check.
Battery:	The remaining time (in [Weeks:Days]) before a battery check.
DC Capacitors:	The remaining time (in [Weeks:Days]) before a DC capacitors check
AC Capacitors:	The remaining time (in [Weeks:Days]) before an AC output filter capacitors check
Fans:	The remaining time (in [Weeks:Days]) before a fan check

Main statistics

Mains bypass failures:	Count of main bypass failures (>200 ms), since UPS installation.
Mains rectifier failure:	Count of mains rectifier failures (>200 ms), since UPS installation.
Transients on the main bypass:	Count of transients on the mains bypass (X..Y ms), during the last 7 days
Bypass reliability degree:	Bypass reliability degree [0..100%]

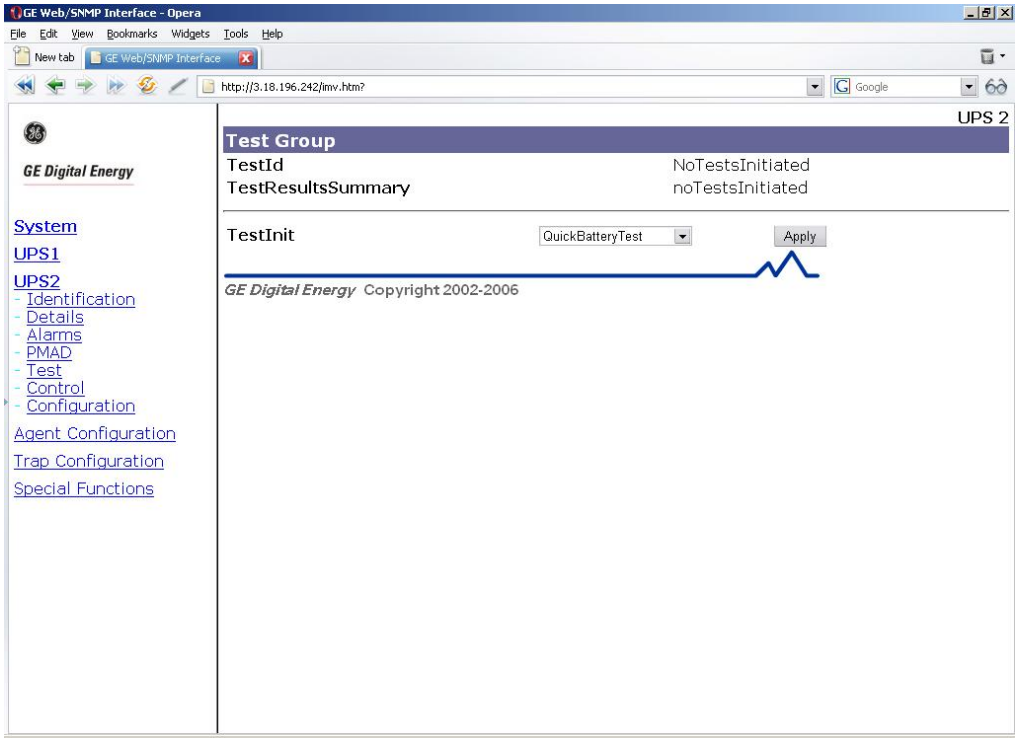
Bus communication

Qty of UPSs:	Number of UPSs as currently seen in the parallel system. The reset button forces a refresh of the count and the display.
Channel table:	The table shows the actual communication status over the two redundant buses between the unit currently selected (in green bold) and other units.

Note: The 'Bus communication section' is only available for single UPSs in a parallel configuration. It is not available for stand-alone UPSs, or for the System in a parallel configuration.

8.2.5 Test web page

Clicking on the "Test" page link a similar screen will appear:



Meaning of the different fields shown at the UPS Tests page:

Test Group

Test ID: Shows the name of the test in progress if a test is in progress or the name of the last test performed, if no test is in progress, unless no test has been run, in which case the value NoTestsInitiated is returned.

Test Result Summary: The results of the current, or last UPS diagnostics test performed.
The values for donePass,doneWarning, and doneError indicate that the test was completed either successfully, with a warning, or with an error, respectively.
The value aborted is returned for tests which are aborted by setting the value TestInit to AbortTestInProgress.
Tests which have not yet concluded are indicated by inProgress.
The value noTestsInitiated indicates that no previous test results are available, such as is the case when no tests have been run since the last reinitialization of the network management subsystem and the system has no provision for non-volatile storage of test results.

Test Init: Gives the possibility to choose between four different actions that the UPS could perform:

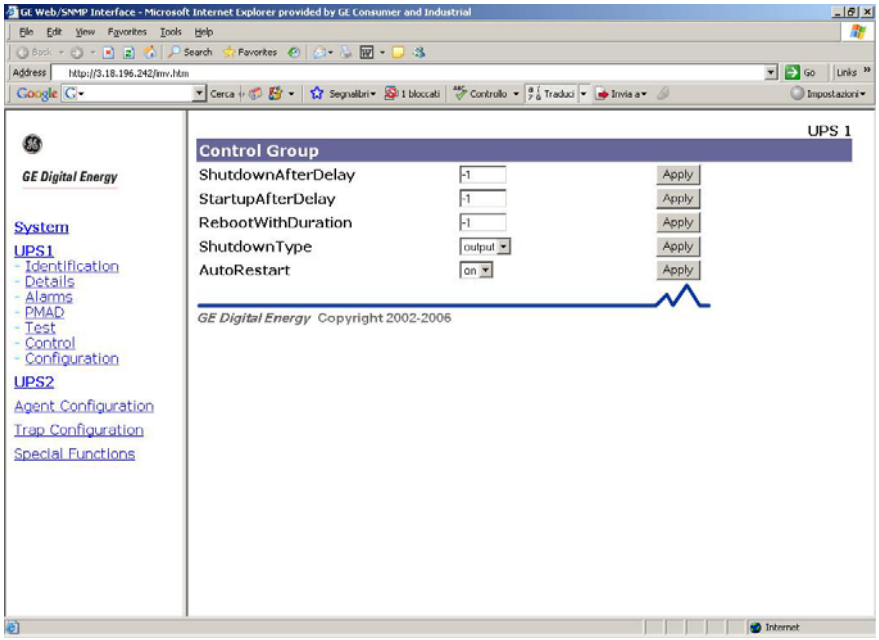
QuickBatteryTest:	A test sufficient, to determine if the battery needs replacement.
Abort Test In Progress:	The test in progress has to be aborted.
GeneralSystemTest:	The manufacturer's standard test of UPS device systems.
DeepBatteryCalibration:	The system is placed on battery to a discharge level, set by the manufacturer, sufficient to determine battery replacement and battery run-time with a high degree of confidence.

WARNING: **this test will leave the battery in a low charge state and will require time for recharging to a level sufficient to provide normal battery duration for the protected load**.

NOTE: **Only after clicking in the "Apply" button the UPS starts to perform the action**.

8.2.6 Control web page

Clicking on the "Control" page link a similar screen appears:



Meaning of the different fields present at the UPS Tests page:

Control Group

Shutdown After Delay: Setting this object will shutdown (i.e., turn off) either the UPS output or the UPS system (as determined by the value of ShutdownType at the time of shutdown) after the indicated number of seconds, or less if the UPS batteries become depleted. Setting this object to 0 will cause the shutdown to occur immediately. Setting this object to -1 will abort the countdown. If the system is already in the desired state at the time the countdown reaches 0, then nothing will happen. That is, there is no additional action at that time if upsShutdownType = system and the system is already off. Similarly, there is no additional action at that time if upsShutdownType = output and the output is already off. When the page is refreshed, the ShutdownAfterDelay will return the number of seconds remaining until shutdown, or -1 if no shutdown countdown is in effect.
Sets to this object overrides any ShutdownAfterDelay already in effect.

Startup After Delay: Setting this object will start the output after the indicated number of seconds, including starting the UPS, if necessary. Setting this object to 0 will cause the startup to occur immediately. Setting this object to -1 will abort the countdown. If the output is already on at the time the countdown reaches 0, then nothing will happen. Settings to this object override the effect of any StartupAfterDelay countdown or RebootWithDuration countdown in progress. When the page is refreshed, StartupAfterDelay will return the number of seconds until startup, or -1 if no startup countdown is in effect. If the countdown expires during a utility failure, the startup shall not occur until the utility power is restored.

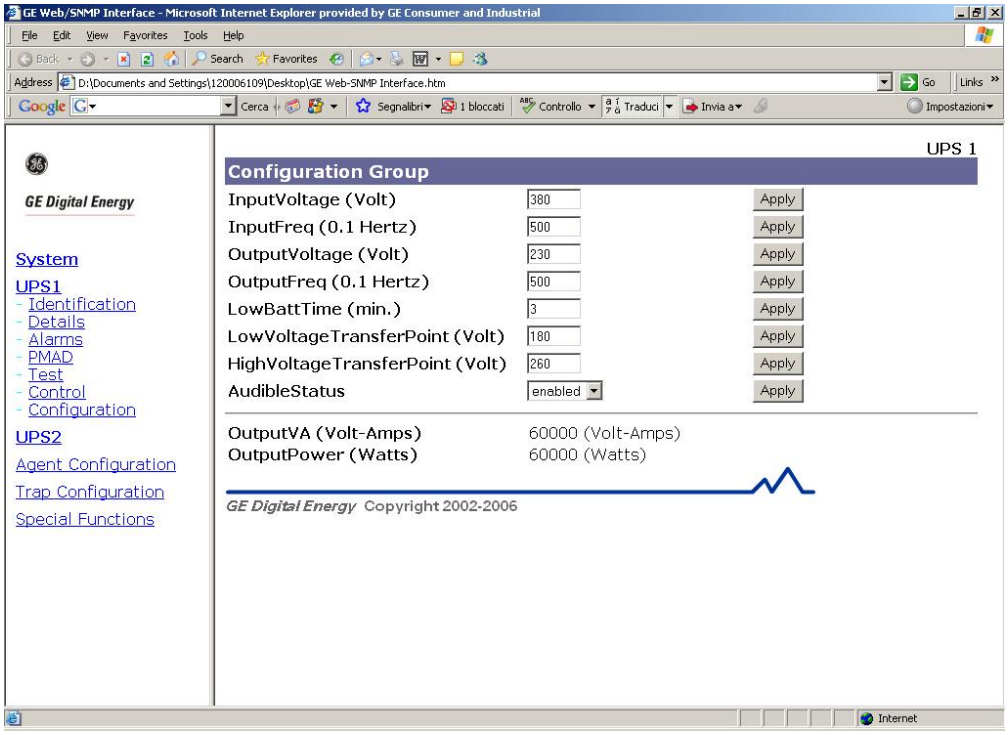
Reboot with Duration: Setting this object will immediately shutdown (i.e.,turn off) either the UPS output or the UPS system (as determined by the value of ShutdownType at the time of shutdown) for a period equal to the indicated number of seconds, after which time the output will be started, including starting the UPS, if necessary. If the number of seconds required to perform the request is greater than the requested duration, then the requested shutdown and startup cycle shall be performed in the minimum time possible, but in no case shall this require more than the requested duration plus 60 seconds. When the page is refreshed, RebootWithDuration shall return the number of seconds remaining in the countdown, or -1 if no countdown is in progress. If the startup should occur during a utility failure, the startup shall not occur until the utility power is restored.

Shutdown Type: This object determines the nature of the action to be taken at the time when the countdown of the ShutdownAfterDelay and RebootWithDuration objects reaches zero.
Setting this object to output indicates that shutdown requests should cause only the output of the UPS to turn off. Setting this object to system indicates that shutdown requests will cause the entire UPS system to turn off.

Auto Restart: Setting this object to 'on' will cause the UPS system to restart after a shutdown if the shutdown occurred during a power loss as a result of either a ShutdownAfterDelay or an internal battery depleted condition. Setting this object to 'off' will prevent the UPS system from restarting after a shutdown until an operator manually or remotely explicitly restarts it. If the UPS is in a startup or reboot countdown, then the UPS will not restart until that delay has been satisfied.

8.2.7 Configuration web page

Clicking on the "Configuration" page link a similar screen appears:



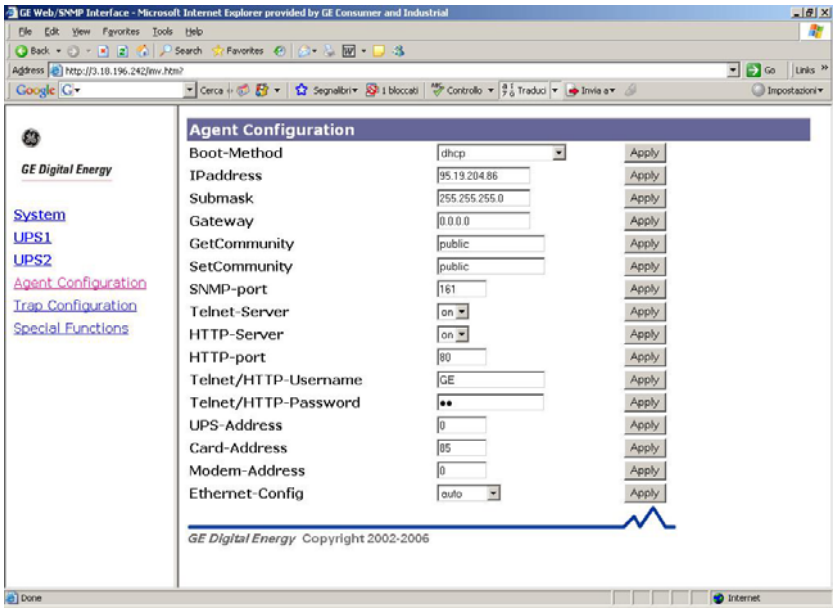
Meaning of the different fields present at the UPS Configuration page:

Configuration Group

Input Voltage:	The magnitude of the nominal input voltage.
Input Frequency:	The nominal input frequency.
Output Voltage:	The magnitude of the nominal output voltage.
Output Frequency:	The nominal output frequency.
Low Battery Time:	The value of EstimatedMinutesRemaining (see page "UPS Details") at which a lowBattery condition is declared.
Low Voltage Transfer Point:	The minimum input line voltage allowed before the UPS system transfers to battery backup.
High Voltage Transfer Point:	The maximum line voltage allowed before the UPS system transfers to battery backup.
Audible Status:	The requested state of the audible alarm. When in the disabled state, the audible alarm should never sound. The enabled state is self-describing. Setting this object to muted when the audible alarm is sounding shall temporarily silence the alarm. It will remain muted until it would normally stop sounding and the value returned for read operations during this period shall equal muted. At the end of this period, the value shall revert to enabled. Writes of the value muted when the audible alarm is not sounding shall be accepted but otherwise shall have no effect.
Output VA:	The magnitude of the nominal VA rating.
Output Power:	The magnitude of the nominal true power rating.

8.2.8 Agent Configuration web page

Clicking on the "Agent Configuration" page link a similar screen appears:



Meaning of the different fields present at the Agent Configuration page:

Agent Configuration

Boot-Method: Defines the way the SNMP plug in card boots and links itself up to the network.
dhcp -> The card obtains its dynamic IP-address from a DHCP server.
bootp -> The card obtains its static IP-address from the BOOTP server.
configured ip/mask/gw -> The card uses a static IP-address configured in its ROM.

IP Address: The static IP-address of the SNMP plug in card.
Note: If BOOTP/ DHCP is used this value is ignored.

SubMask: The subnet the SNMP plug in card is situated in.
Note: If BOOTP/DHCP is used AND the BOOTP/DHCP server provides the subnet mask, this value is ignored.

Gateway: The IP-address of the default gateway (default router).
Note: If BOOTP/DHCP boot-method is used AND the BOOTP/DHCP server provides the IP-address to the default gateway this value is ignored.

Get Community: SNMP community name (password) to read SNMP UPS information from the SNMP plug in card.

Set Community: SNMP community name (password) to write SNMP UPS information to the SNMP plug in card.

SNMP-port: Specifies the SNMP plug in card's UDP communication port number.

Telnet-Server: Enables (on) or disables (off) configuration via telnet.

HTTP-Server: Enables (on) or disables (off) configuration via web browser.

HTTP-port: Specifies the SNMP plug in card's HTTP communication port number.

Telnet/http-Username: Username to protect the SNMP card from unauthorised access via http or telnet session.

Telnet/http -Password: Password to protect the SNMP card from unauthorised access via http or telnet session.

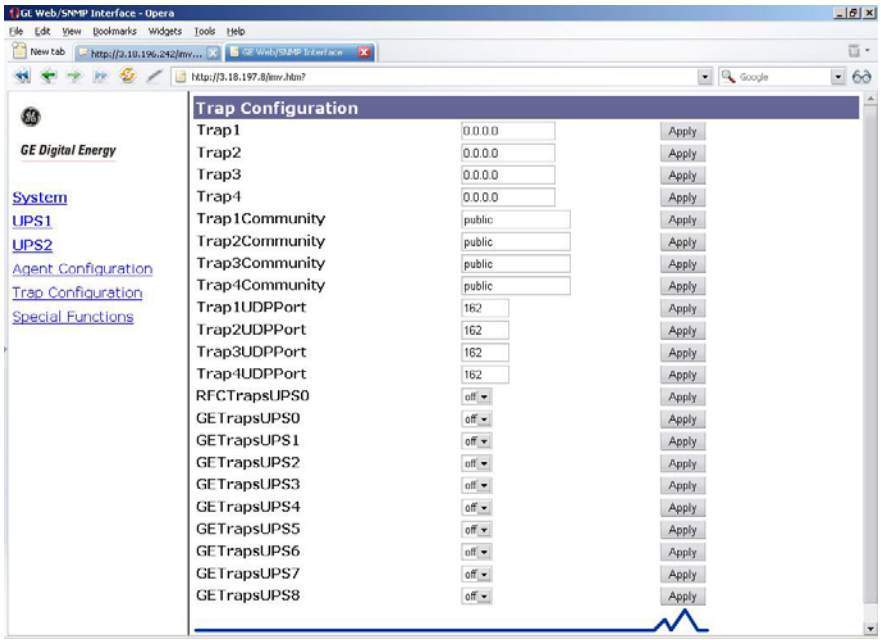
UPS-Address: This is the logical address of the UPS. This address can be detected automatically if this parameter is set to zero.

Card-Address: This is the logical address of the card and, when different from zero, overrides the jumper setting. The valid range for this value is [84...87].

Ethernet-Config: Defines how the board should detect the correct Ethernet interface.
- Setting this parameters to "Auto", forces a full autodetection.
- Setting this parameters to "10/100TP", restricts the detection to the RJ45 connector (10 BASE-T or 100 BASE-TX).
- Setting this parameters to "10 TP/BNC", restricts the detection to 10 Mbits (10 BASE-T or BNC).
- Setting this parameters to BNC,100TP or 10TP the board refrains from autodetection and imposes the specific interface and speed.

8.2.9 Trap Configuration web page

Clicking on the "Trap Configuration" page link a similar screen appears:



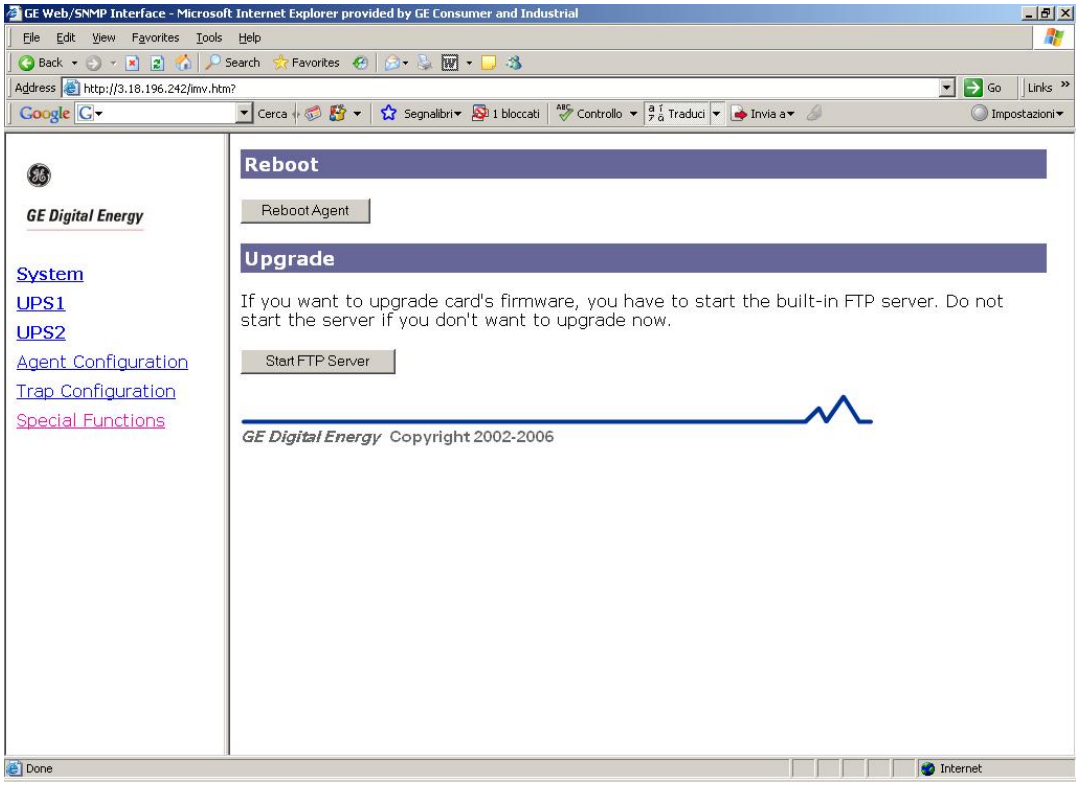
Meaning of the different fields present at the Trap Configuration page:

Trap Configuration

Trap 1:	Specifies the destination IP-address of Network Management Stations trap 1 has to be sent to. To disable the trap specify [0.0.0.0] as address.
Trap 2:	Specifies the destination IP-address of Network Management Stations trap 2 has to be sent to. To disable the trap specify [0.0.0.0] as address.
Trap 3:	Specifies the destination IP-address of Network Management Stations trap 3 has to be sent to. To disable the trap specify [0.0.0.0] as address.
Trap 4:	Specifies the destination IP-address of Network Management Stations trap 4 has to be sent to. To disable the trap specify [0.0.0.0] as address.
Trap 1 Community:	Specifies the community name of Network Management Stations trap 1 is sent to.
Trap 2 Community:	Specifies the community name of Network Management Stations trap 2 is sent to.
Trap 3 Community:	Specifies the community name of Network Management Stations trap 3 is sent to.
Trap 4 Community:	Specifies the community name of Network Management Stations trap 4 is sent to.
Trap 1 UDP Port:	The UDP port-number for the trap destination 1 previously defined.
Trap 2 UDP Port:	The UDP port-number for the trap destination 2 previously defined.
Trap 3 UDP Port:	The UDP port-number for the trap destination 3 previously defined.
Trap 4 UDP Port:	The UDP port-number for the trap destination 4 previously defined.
RFC Traps UPS 0:	Enabled/Disabled the sent of RFC trap for the UPS 0.
GE Traps UPS 0:	Enabled/Disabled the sent of GE trap for the UPS 0.
GE Traps UPS 1:	Enabled/Disabled the sent of GE trap for the UPS 1.
GE Traps UPS 2:	Enabled/Disabled the sent of GE trap for the UPS 2.
GE Traps UPS 3:	Enabled/Disabled the sent of GE trap for the UPS 3.
GE Traps UPS 4:	Enabled/Disabled the sent of GE trap for the UPS 4.
GE Traps UPS 5:	Enabled/Disabled the sent of GE trap for the UPS 5.
GE Traps UPS 6:	Enabled/Disabled the sent of GE trap for the UPS 6.
GE Traps UPS 7:	Enabled/Disabled the sent of GE trap for the UPS 7.
GE Traps UPS 8:	Enabled/Disabled the sent of GE trap for the UPS 8.

8.2.10 Special Functions web page

Clicking in the header identifier page “Special Functions” a similar screen appears:


GE Web/SNMP Interface - Microsoft Internet Explorer provided by GE Consumer and Industrial
File Edit View Favorites Tools Help
Back Search Favorites
Address http://3.18.196.242/imv.htm?
Go Links
Google Cerca Segnalibri 1 bloccati Controllo Traduci Invia a Impostazioni
GE Digital Energy
System
UPS1
UPS2
Agent Configuration
Trap Configuration
Special Functions
Reboot
Reboot Agent
Upgrade
If you want to upgrade card's firmware, you have to start the built-in FTP server. Do not start the server if you don't want to upgrade now.
Start FTP Server
GE Digital Energy Copyright 2002-2006
Done
Internet

Meaning of the different fields present at the Special Functions page:

Reboot

Reboot Agent: Reboots the SNMP plug to activate the changes made to the configuration and exit from the current configuration session.

Upgrade

Start FTP Server: Enable and start the FTP server to update the firmware.
When the new release of the software has been transferred to the card using FTP protocol press the “Upgrade firmware “ button.
For more details see *Chapter 7*.

9 UPDATE FIRMWARE

The *SNMP card* gives the possibility to update the firmware via LAN using a FTP server.

9.1 UPDATE FIRMWARE USING TELNET OR SERIAL LINE

Here, the necessary steps to update the firmware using Telnet or serial line:

1. Check the version of the firmware at the top of the setup menu (vZ.ZZ = firmware version, bX.XX backup version):

   --<<Current config>>----<<Code vZ.ZZ bX.XX>>----[MAC=00:50:c2:09:70:02]----------

2. Enable the FTP server typing the key "L" in the setup menu

   GE> L
   FTP Server Ready. Ftp the image and press Enter.

3. FTP the new version of the firmare.
   This step can be accomplished using a windows FTP program or using DOS commands as follows:

   C:\>ftp XXX.XXX.XXX.XXX [Enter]
   Connected to XXX.XXX.XXX.XXX
   220 FTP Server (Version 1.0) ready.
   User (XXX.XXX.XXX.XXX :(none): [Enter]
   230 User logged in, proceed.
   ftp> bin
   200 Command okay.
   ftp> put <path of file for the new version firmware> [Enter]
   200 Command okay.
   150 File status okay; about to open data connection
   226 Closing data connection. Requested file action successful.
   XYXYXY nytes sent in ZZ,ZZ seconds (XYXY Kbyte/sec)
   ftp> bye [Enter]
   221 Service closing control connection. Logged out if appropriate.
   C:\>

4. Press the key "Enter" in the setup menu.
   Avoid after this step to reset or disconnect the card!
   If the connection with the setup menu has been established using Telnet, after this step the connection is lost, otherwise if the connection has been established using RS232, the following screen appears in the setup menu:

   Uploaded file found, checking md5 sum

   MD5 sum ok. Flashing file: XXXXXXXXXX

   Please wait. After flashing, the card will be restarted.
   . Starting sector erase
   . Waiting for completion
   . Starting programming
   . Waiting for completion
   . Ok! Waiting for reset

   Waiting for reset (watchdog or manual).

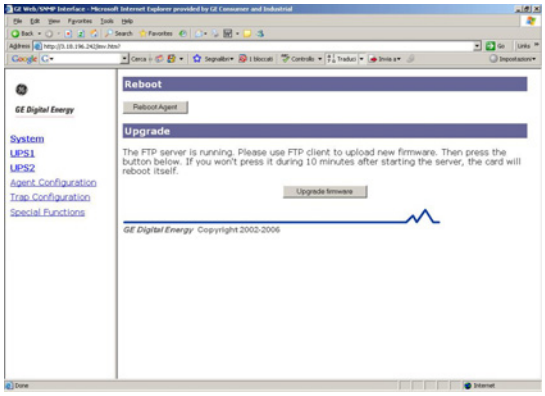
5. Wait about 30 sec. to permit the card to update the software and then check if the version of the firmware has changed.

   --<<Current config>>----<<Code v1.01>>----[MAC=00:50:c2:09:70:02]----------

9.2 UPDATE FIRMWARE USING WEB BROWSER

Here the necessary steps to update the firmware using a Web Browser:

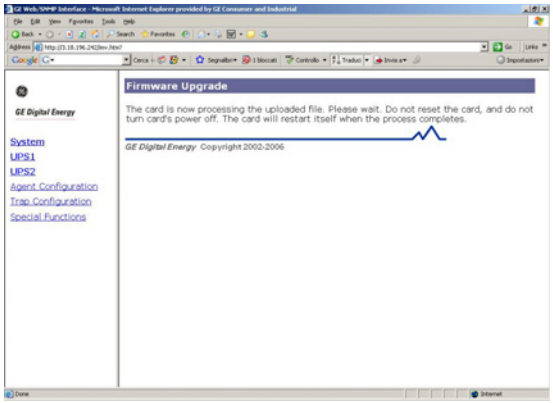
1. Check the version of the firmware at the “AgentsoftwareVersion” field of the “UPS Identification” web page.
2. Enable the FTP server by clicking on the button “Start FTP Server” in the “Special Function” web page. After this step a similar web page will appear:


Reboot
Reboot Agent
Upgrade
The FTP server is running. Please use FTP client to upload new firmware. Then press the button below. If you won't press it during 10 minutes after starting the server, the card will reboot itself.
Upgrade firmware
GE Digital Energy Copyright 2002-2006
System
UPS1
UPS2
Agent Configuration
Trap Configuration
Special Functions

3. FTP the new version of the firmare.
   This step can be accomplished using a windows FTP program or using the following DOS commands:

   C:\>ftp XXX.XXX.XXX.XXX [Enter]
   Connected to XXX.XXX.XXX.XXX
   220 FTP Server (Version 1.0) ready.
   User (XXX.XXX.XXX.XXX :(none)): [Enter]
   230 User logged in, proceed.
   ftp> bin
   200 Command okay.
   ftp> put <path of file for the new version firmware> [Enter]
   200 Command okay.
   150 File status okay; about to open data connection
   226 Closing data connection. Requested file action successful.
   XYXYXY nytes sent in ZZ,ZZ seconds (XYXY Kbyte/sec)
   ftp> bye [Enter]
   221 Service closing control connection. Logged out if appropriate.
   C:\>

4. Click to the “Upgrade firmware” button and a similar web page appears:


Firmware Upgrade
The card is now processing the uploaded file. Please wait. Do not reset the card, and do not turn card's power off. The card will restart itself when the process completes.
GE Digital Energy Copyright 2002-2006
System
UPS1
UPS2
Agent Configuration
Trap Configuration
Special Functions

   Avoid after this step to reset or disconnect the card!

   Wait about 30 sec. to permit the card to update the software, them check if the version of the firmware has changed in the “UPS Identification” web page.

10 SUPPORTED MIB VARIABLES

MIB VARIABLE

==== IDENTIFICATION Group ====
UpsIdentManufacturer
UpsIdentModel
UpsIdentUPSSoftwareVersion
UpsIdentAgentSoftwareVersion
UpsIdentName
UpsIdentAttachedDevices

==== BATTERY Group ====
UpsBatteryStatus
UpsSecondsOnBattery
UpsEstimatedMinutesRemaining
UpsEstimatedChargeRemaining
UpsBatteryVoltage
UpsBatteryCurrent
UpsBatteryTemperature

==== INPUT Group ====
UpsInputLineBads
UpsInputNumLines
UpsInputFrequency
UpsInputVoltage
UpsInputCurrent
UpsInputTruePower

==== OUTPUT Group ====
UpsOutputSource
UpsOutputFrequecny
UpsOutputNumLines
UpsOutputVoltage
UpsOutputCurrent
UpsOutputPower
UpsOutputPercentLoad

==== ALARM Group ====
UpsAlarmsPresent

==== CONTROL Group ====
UpsShutdownType
UpsShutdownAfterDelay
UpsStartUpAfterDelay
UpsRebootWithDuration
UpsAutoRestart

==== Bypass Group ====
UpsBypassFrequency
UpsBypassNumLines
UpsBypassLineIndex
UpsBypassVoltage
UpsBypassCurrent
UpsBypassPower

==== Test Group ====
UpsTestID
UpsTestSpinLock
UpsTestResultSummary
UpsTestResultsDetails
UpsTestStartTime
UpsTestElapsedTime

POSSIBLE ALARMS

==== ALARM ID ====
UpsAlarmBatteryBad
UpsAlarmOnBattery
UpsAlarmLowBattery
UpsAlarmDepletedBattery
UpsAlarmTempBad
UpsAlarmInputBad
UpsAlarmOutputBad
UpsAlarmOutputOverload
UpsAlarmOnBypass
UpsAlarmBypassBad
UpsAlarmOutputOffAsRequested
UpsAlarmUpsOffAsRequested
UpsAlarmChargerFailed
UpsAlarmUpsOutputOff
UpsAlarmUpsSystemOff
UpsAlarmFanFailure
UpsAlarmFuseFailure
UpsAlarmGeneralFault
UpsAlarmDiagnosticTestFailed
UpsAlarmCommunicationsLost
UpsAlarmAwaitingPower
UpsAlarmShutdownPending
UpsAlarmShutdownImminent
UpsAlarmTestInProgress
UpsAlarmReceptacleOff

SUPPORTED TRAPS

==== TRAP TYPE ====
UpsTrapOnBattery
UpsTrapTestCompleted
UpsTrapAlarmEntryAdded
UpsTrapAlarmEntryRemoved

11 TROUBLESHOOTING

Communication Lost alarm
The activation of the 'Communication Lost' alarm signals a problem in the communication between the Adv. SNMP card and the UPS. The possible causes for the alarm are the following:

- Communication with the UPS is lost or could not be established
- Configuration error: there is a collision in the SNMP card address configuration

If the alarm is activated, verify that the card is installed and configured according to the instructions included in Chapter 4-INSTALLATION.

Note: The Green LED on the front of the SNMP card adapter gives indication on the status of the communication with the UPS:

- LED on and stable: no communication with the UPS
- LED blinking slow (1/sec.): communication with the UPS OK

If two SNMP adapter cards are present in the system (whether plugged in the same unit or plugged in different units within the same parallel system), there may be an address collision – that is, two or more cards have been configured with the same logical address.

Check the SNMP card logical address. The address can be set via an HW configuration (jumper J5, J6 – refer to Chapter 4-INSTALLATION) or SW configuration (*O.CardAddr* option, refer to Chapter 7-CONFIGURATION OPTIONS).

Note: the SW configuration can be set to *0-autoselect* (the board address is determined by the jumper settings); otherwise the SW configuration overrides the jumper settings.

12 SUPPORT

1. **First line support**
   Please contact your local GE distributor for problems with the installation or their use.

2. **Internet Support**
   On-line support is possible on request, if your computer has access to the Internet.

3. **WWW Server Support**
   We have a WWW server running at www.gedigitalenergy.com.
   With your favourite WEB browser you can access the latest information from GE and besides you can download the last updates and manuals regarding this card.

4. **Fax and e-mail support**
   Completely filled out Support request forms can be used by our distributors only:
   faxed to: +41 91 859 17 27
   e-mailed to: GEDEConnectsupport@GE.com
   End users and corporate users can use the form to contact their supplier.

5. **Inquiries and Suggestions**
   For inquiries about the product or suggestions for improvements, you may also use the addresses mentioned above.

SUPPORT REQUEST FORM

Company: .....

Name: .....
Telephone: .....
Fax: .....
E-mail: .....

Product name:
Version number: (please display the configuration screen, as specified on chapter 7 and chapter 8, and write down the code-version from the first line)

Computer brand / model: .....
Processor: .....
Operating System: .....
Version / release of OS: .....

Type of UPS: .....
Type of interface cable: .....

Problem description: .....

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